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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,335	12/06/2000	Dale Thayer	MBHB00-150	8751

7590 06/10/2003

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EXAMINER

KIKNADZE, IRAKLI

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,335

Applicant(s)

THAYER, DALE

Examiner

Irakli Kiknadze

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-33 is/are allowed.
- 6) ☒ Claim(s) 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. In response to the Office Action of October 29, 2002 the Amendment has been received on February 6, 2003.

Claims 16, 26 and 34 have been amended.

2. The indicated allowability of claim 34 is withdrawn in view of the newly discovered reference(s) to Rooks (US Patent 5,719,952). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 34 is rejected under 35 U.S.C. 102(b) as being anticipated by Rooks (US Patent 5,719,952).

With respect to claim 34, Rooks discloses (Figs. 6a and 6b) a method for acquiring a plurality of off-axis x-ray images comprising: producing a steerable X-ray beam from a number of different positions along a horizontal path perpendicular to a vertical axis, directing and receiving on a detector X-rays that are transmitted through a first region of interest; directing and receiving on the detector x-rays that are transmitted

through the second region of interest; and producing electronic representation of acquired off-axis images corresponding to the regions of interest (column 5; lines 15-40).

Allowable Subject Matter

5. Claims 1-34 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Claims 1-12 are allowed because prior art fails to disclose or make obvious an apparatus for acquiring off-axis images of a plurality of regions of interest, comprising: an x-ray detector located to simultaneously receive portions of the beam that have passed through a subset of the plurality of regions of interest, the x-ray detector producing from the received portions of the beam a plurality of discrete images, each of the plurality of discrete images being associated with a region of interest in the subset of the plurality of regions of interest, wherein at least one of the source, the surface, and the detector may be moveable to position the regions of interest within the beam.

Claims 13-15 are allowed because prior art fails to disclose or make obvious a method for acquiring off-axis X- ray image data for a plurality of regions of interest, comprising the steps of simultaneously detecting the portion of the beam for the plurality o regions of interest and-producing, a plurality of discrete image data, each of the plurality o discrete image data corresponding to each of the regions of interest; adjusting the location of a subset of the plurality of regions of interest remaining within the beam, repeating the step of simultaneously detecting and producing image data,

and combining image data for at least one region of interest to generate a tomosynthetic image of the region of interest.

Claims 16-25 are allowed because prior art fails to disclose or make obvious an apparatus for an apparatus for acquiring off-axis X-ray images of a plurality of regions of interest, comprising: a non-rotatable source; a detector located to receive portions of a beam that passes through a subset to simultaneously produce an electronic representation of an image for each region of interest; wherein at least one of the source, a surface to support the subset, and the detector may be moveable to position the regions of interest within the beam.

Claims 26-30 are allowed because prior art fails to disclose or make obvious an apparatus for acquiring off-axis X-ray images of test objects comprising: an x-ray source with a steerable electron beam from a number of different positions along a horizontal path; and a high-resolution detector positioned to receive x-rays that are transmitted through at least two regions of interest of the test object from each of the positions and to produce electronic representations of acquired off-axis images corresponding to the regions of interest.

Claims 31-33 are allowed because prior art fails to disclose or make obvious a method for simultaneously acquiring a plurality of off-axis x-ray images comprising: directing X-ray beams to the regions of interest, the X-ray beams being directed off-axis with respect to a vertical axis through the inspection plane; receiving on a detector X-rays that are transmitted through the regions of interest; and simultaneously producing

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electronic representations of acquired off-axis images corresponding to the regions of interest.


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bowles (U. S. Patent No. 5,594,770) describes a method and apparatus for imaging obscured areas of a test object. Baker et al (U. S. Patent No. 5,259,012) describes a laminography system with electromagnetically directed multipath radiation source.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is (703) 305-6464. The examiner can normally be reached on M-F(8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


IRAKLI KIKNADZE
EXAMINER
MAY 30 2003

Irakli Kiknadze
May 30, 2003